ABSTRACT

METHOD AND DEVICE FOR MANAGING COMMUNICATIONS IN A RANDOM
ACCESS COMMUNICATION NETWORK BY MULTIWINDOWING NETWORK
ACCESS REQUESTS

A device (D) is dedicated to communication management in a base station
(SB) of a random access communication network. The device comprises
processing means (MT) adapted i) to divide time intervals into time slots
each associated with an access time slot during which a terminal (UE) is able
to send an access request to the network and of width equal to the duration
of an access request, ii) to divide said time intervals into sub-intervals (SI)
including at least two consecutive time slots, iii) to designate in each sub-
interval (SI) at least one prohibited time slot associated with a prohibited
access time slot, iv) to define in each sub-interval (SI) a number, at least
equal to the number of time slots that it contains, of windows (F) offset in
time and of width equal to that of a time slot, and v), in the event of
reception of an access request sent by a requesting terminal (UE), to
deduce from the window (F) to which the access request belongs at least
one access delay of the requesting terminal relative to a reference and
then to determine from the access delay the time of sending an
acknowledgement message to said requesting terminal (UE) so that it is able
to receive it in a predefined acknowledgement time slot.

(Figure 1)